The weakening of strong preterites in West-Germanic: an interdisciplinary approach

From the earliest attested stages on, Germanic languages have at their disposal two competing strategies for building preterites. One strategy, exemplified by *sing-song*, is called the strong inflection. It relies on root apophony (ablaut), and is a reanalysis and extension of an earlier Indo-European aspectual system (Prokosch 1939; Lass 1990). The other strategy, exemplified by *work-worked*, is called the weak inflection. It does not use apophony, but suffixation, and finds its origin in the morphologisation of a Indo-European stem $*d^heh_1$/$*d^hoh_1$ ('do') added to the verb, eventually turning into a dental suffix (Ball 1968; Tops 1974; Bailey 1997; Hill 2010), though other sources have contributed as well (Heath 1998; Ringe 2007; Hill 2010).

Setting the emergence of a third strategy later in Germanic, namely the analytic perfect (exemplified in Afrikaans *werk – het gewerk*, lit. 'has worked') aside, it has often been observed that despite occasional shifts in the opposite direction, Germanic displays a long-term drift in which the weak inflection takes the upper hand at the expense of the strong inflection, although the strong inflection remains remarkably resilient, and still has not fully succumbed to the overall weakening trend (Van Haeringen 1940). Recent years have seen publications in which this 'weakening' drift is cast in quantitative terms. Lieberman et al. (2007) notice that in English, the weakening of the verbs follows a constant rate through time, is only dependent on the frequency of the verb, and neatly scales proportionally to the square root of the frequency of verbs. However, Carroll et al. (2012) replicated the study for German and found no such constant rate, hence casting doubt on the universality of the mathematical regularity that seemed to govern the weakening.

In our talk, we replicate the Lieberman et al. and the Carroll study for Dutch, allowing a comparison between the three languages in the Van Haeringen (1956) tradition. Our results confirm Carroll et al. (2012)'s critique on the constant rate.

Carroll et al. suggested that underlying the differences between English and German are demographic factors, but they left it to future research to actually dig deeper into the demographic history. In our talk, we pick up this thread and couple the weakening with historical demography. Our results indicate that the differences between these three big West-Germanic languages indeed seem related to population effects. Evidence is drawn from grammars and historical demographic databases. We further support our claims with agent-based computer simulation, extending earlier work by Pijpops et al. (2015).

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